VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claims 1-38, have been canceled and new claims 39-55 have been added as follows:

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39. **(New)** An isolated nucleic acid molecule comprising the nucleotide sequence set forth in SEQ ID NO:1, or a complement thereof.

40. **(New)** An isolated nucleic acid molecule consisting of the nucleotide sequence set forth in SEQ ID NO:1, or a complement thereof.

41. **(New)** An isolated nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2, or a complement thereof.

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42. **(New)** An isolated nucleic acid molecule which encodes a polypeptide consisting of the amino acid sequence set forth in SEQ ID NO:2, or a complement thereof.

43. **(New)** An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating cell wall biosynthesis.

44. **(New)** An isolated nucleic acid molecule consisting of a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating cell wall biosynthesis.

45. **(New)** An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a

complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating the production of a fine chemical.

46. **(New)** An isolated nucleic acid molecule consisting of a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating the production of a fine chemical.

47. **(New)** An isolated nucleic acid molecule comprising the nucleic acid molecule of any one of claims 39-42, and a nucleotide sequence encoding a heterologous polypeptide.

48. **(New)** A vector comprising the nucleic acid molecule of any one of claims 39-42.

49. **(New)** The vector of claim 48, which is an expression vector.

50. **(New)** A host cell transfected with the expression vector of claim 49.

51. **(New)** The host cell of claim 50, wherein said cell is a bacterial cell.

52. **(New)** The host cell of claim 51, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium.*

53. **(New)** The host cell of claim 52, wherein the expression of said nucleic acid molecule results in the modulation in production of a fine chemical from said cell.

54. **(New)** The host cell of claim 53, wherein said fine chemical is selected from the group consisting of: organic acids, proteinogenic and nonproteinogenic amino acids, purine and pyrimidine bases, nucleosides, nucleotides, lipids, saturated and

unsaturated fatty acids, diols, carbohydrates, aromatic compounds, vitamins, cofactors, polyketides, and enzymes.

C1

55. **(New)** A method of producing a polypeptide comprising culturing the host cell of claim 53 under conditions in which the nucleic acid molecule is expressed, thereby expressing the polypeptide.

APPENDIX A

39. An isolated nucleic acid molecule comprising the nucleotide sequence set forth in SEQ ID NO:1, or a complement thereof.

40. An isolated nucleic acid molecule consisting of the nucleotide sequence set forth in SEQ ID NO:1, or a complement thereof.

41. An isolated nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2, or a complement thereof.

42. An isolated nucleic acid molecule which encodes a polypeptide consisting of the amino acid sequence set forth in SEQ ID NO:2, or a complement thereof.

43. An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating cell wall biosynthesis.

44. An isolated nucleic acid molecule consisting of a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating cell wall biosynthesis.

45. An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating the production of a fine chemical.

46. An isolated nucleic acid molecule consisting of a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating the production of a fine chemical.

47. An isolated nucleic acid molecule comprising the nucleic acid molecule of any one of claims 39-42, and a nucleotide sequence encoding a heterologous polypeptide.

48. A vector comprising the nucleic acid molecule of any one of claims 39-42.

49. The vector of claim 48, which is an expression vector.

50. A host cell transfected with the expression vector of claim 49.

51. The host cell of claim 50, wherein said cell is a bacterial cell.

52. The host cell of claim 51, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium*.

53. The host cell of claim 52, wherein the expression of said nucleic acid molecule results in the modulation in production of a fine chemical from said cell.

54. The host cell of claim 53, wherein said fine chemical is selected from the group consisting of: organic acids, proteinogenic and nonproteinogenic amino acids, purine and pyrimidine bases, nucleosides, nucleotides, lipids, saturated and unsaturated fatty acids, diols, carbohydrates, aromatic compounds, vitamins, cofactors, polyketides, and enzymes.

55. A method of producing a polypeptide comprising culturing the host cell of claim 53 under conditions in which the nucleic acid molecule is expressed, thereby expressing the polypeptide.

lalign output for seq id no 1 vs. wachi

[ISREC-Server] Date: Fri Aug 23 19:35:24 MET 2002

---

reset matrix file to /export/molbio/share/fasta2/pam120.mat ./wwwtmp/lalign/.9492.1.seq : 1581 aa

```
ALIGN calculates a global alignment of two sequences
 version 2.0uPlease cite: Myers and Miller, CABIOS (1989) 4:11-17
seq id no 1                                         1581 aa vs.
wachi                                               2291 aa
scoring matrix: /export/molbio/share/fasta2/pam120.mat, gap penalties: -12/-4
68.1% identity;          Global alignment score: 5614

               10        20        30        40        50        60
./wwwt GCAGGTAACGCCTCCACGGTGATTGCAGACATGATTGCTGCAACTATCAATAGCCAACAC
              :::: ::::::::::::::::::::::::::::::::::::::.:::::::::
wachi  -------ACGCGTCCACGGTGATTGCAGACATGATTGCTGCAACTATCAAAAGCCAACAC
                      10        20        30        40        50

               70        80        90       100       110       120
./wwwt AACTAAAACGACCAGCTCAACGCAAAGGAATAGTTTAAAGGTGACCACTCCACACTTGGA
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  AACTAAAACGACCAGCTCAACGCAAAGGAATAGTTTAAAGGTGACCACTCCACACTTGGA
            60        70        80        90       100       110

              130       140       150       160       170       180
./wwwt TTCTGCACAAGATATTGATCTGTCCCGCGTCCACCTCATCGGTATTGGCGGAGCCGGAAT
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  TTCTGCACAAGATATTGATCTGTCCCGCGTCCACCTCATCGGTATTGGCGGAGCCGGAAT
           120       130       140       150       160       170

              190       200       210       220       230       240
./wwwt GTCTGGCGTTGCCCGAATCCTGCTTGCCCGCGGTAAGACAGTCACTGGTTCCGATGCCAA
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  GTCTGGCGTTGCCCGAATCCTGCTTGCCCGCGGTAAGACAGTCACTGGTTCCGATGCCAA
           180       190       200       210       220       230

              250       260       270       280       290       300
./wwwt AGATTCCCGCACCTTGCTTCCACTCCGCGCCGTGGGAGCCACCATCGCAGTGGGACACGC
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  AGATTCCCGCACCTTGCTTCCACTCCGCGCCGTGGGAGCCACCATCGCAGTGGGACACGC
           240       250       260       270       280       290

              310       320       330       340       350       360
./wwwt TGCGGAAAACCTTGAGCTTTCCGGCGAACTTCCCACCGTCGTGGTGACCTCTTTTGCCGC
        :::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  CGCGGAAAACCTTGAGCTTTCCGGCGAACTTCCCACCGTCGTGGTGACCTCTTTTGCCGC
           300       310       320       330       340       350

              370       380       390       400       410       420
./wwwt CATTCCGCAAGACAACCCGGAACTTGTTCGTGCACGTGAAGAAGGCATTCCGGTTATTCG
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  CATTCCGCAAGACAACCCGGAACTTGTTCGTGCACGTGAAGAAGGCATTCCGGTTATTCG
           360       370       380       390       400       410
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Appendix B

U.S.S.N. 09/603,124 **Attorney Docket Number: BGI-132CP**

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                 430       440       450       460       470       480
./wwwt TCGCTCCGATCTGTTGGGCGAATTGCTGGAAGGCTCCACCCAGGTCTTGATCGCGGGTAC
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  TCGCTCCGATCTGTTGGGCGAATTGCTGGAAGGCTCCACCCAGGTCTTGATCGCGGGTAC
              420       430       440       450       460       470

                 490       500       510       520       530       540
./wwwt CCACGGTAAGACCTCCACCACCTCTATGTCTGTGGTAGCTATGCAGGCAGCGGGCATGGA
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  CCACGGTAAGACCTCCACCACCTCTATGTCTGTGGTAGCTATGCAGGCAGCGGGCATGGA
              480       490       500       510       520       530

                 550       560       570       580       590       600
./wwwt TCCAAGCTTTGCTATCGGCGGACAGCTCAACAAGGCTGGCACCAATGCGCACCATGGAAC
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  TCCAAGCTTTGCTATCGGCGGACAGCTCAACAAGGCTGGCACCAATGCGCACCATGGAAC
              540       550       560       570       580       590

                 610       620       630       640       650       660
./wwwt TGGTGAGGTCTTTATCGCTGAAGCAGATGAATCTGACGCATCGCTGCTGCGCTACAAGCC
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  TGGTGAGGTCTTTATCGCTGAAGCAGATGAATCTGACGCATCGCTGCTGCGCTACAAGCC
              600       610       620       630       640       650

                 670       680       690       700       710       720
./wwwt AAATGTTGCAGTGGTCACCAATGTGGAACCAGACCACCTGGACTTCTTTAAAACCCCTGA
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  AAATGTTGCAGTGGTCACCAATGTGGAACCAGACCACCTGGACTTCTTTAAAACCCCTGA
              660       670       680       690       700       710

                 730       740       750       760       770       780
./wwwt AGCCTACTTCCAAGTGTTCGACGATTTCGCAGGACGCATCACCCCGAACGGCAAGCTGGT
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  AGCCTACTTCCAAGTGTTCGACGATTTCGCAGGACGCATCACCCCGAACGGCAAGCTGGT
              720       730       740       750       760       770

                 790       800       810       820       830       840
./wwwt TGTGTGCCTGAACGATCCTCACGCAGCGGAGCTGGGGGAGAGGTCTGTCCGCAAGGGTAT
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  TGTGTGCCTGAACGATCCTCACGCAGCGGAGCTGGGGGAGAGGTCTGTCCGCAAGGGTAT
              780       790       800       810       820       830

                 850       860       870       880       890       900
./wwwt CAAGACTGTTGGTTACGGTACCGCTGACGCCGTACAGGCACACCCTGAGGTTCCAGCGAT
       ::::::::::::::: :::::::::::::: :::::::::::::::::::::::::::::
wachi  CAAGACTGTTGGTTATGGTACCGCTGACGCAGTACAGGCACACCCTGAGGTTCCAGCGAT
              840       850       860       870       880       890

                 910       920       930       940       950       960
./wwwt GGCTACCATCGTGGATTCCCAAGTTGTCGCAGAAGGCACCCGCGCCACCATCAACATCGA
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  GGCTACCATCGTGGATTCCCAAGTTGTCGCAGAAGGCACCCGCGCCACCATCAACATCGA
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              900       910       920       930       940       950

              970       980       990      1000      1010      1020
./wwwt TGGACAGGAAGTATCTGTGATTCTTCAAATCCCTGGTGATCACATGGTACTCAACGGTGC
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  TGGACAGGAAGTATCTGTGATTCTTCAAATCCCTGGTGATCACATGGTACTCAACGGTGC
              960       970       980       990      1000      1010

             1030      1040      1050      1060      1070      1080
./wwwt AGCCGCCCTGCTGGCCGGATACCTGGTGGGTGGGGACGTCGACAAGCTTGTTGAAGGCTT
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  AGCCGCCCTGCTGGCCGGATACCTGGTGGGTGGGGACGTCGACAAGCTTGTTGAAGGCTT
             1020      1030      1040      1050      1060      1070

             1090      1100      1110      1120      1130      1140
./wwwt GTCGGATTTCTCCGGCGTGCGACGCCGCTTTGAGTTCCACGGTGCTATCGAGGGCGGCAA
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  GTCGGATTTCTCCGGCGTGCGACGCCGCTTTGAGTTCCACGGTGCTATCGAGGGCGGCAA
             1080      1090      1100      1110      1120      1130

             1150      1160      1170      1180      1190      1200
./wwwt ATTTAATGGCGCTGCTATTTATGATGATTACGCACACCACCCAACGGAAGTAACTGCAGT
       :::::::::::: :::::::::::::::::::::::::::::::::::::::::::::::
wachi  ATTTAATGGCGCGGCTATTTATGATGATTACGCACACCACCCAACGGAAGTAACTGCAGT
             1140      1150      1160      1170      1180      1190

             1210      1220      1230      1240      1250      1260
./wwwt GCTCAGCGCTGCGCGCACCCGGGTGAAGGCCGCTGGAAAGGGCCGTGTCATCGTCGCGTT
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  GCTCAGCGCTGCGCGCACCCGGGTGAAGGCCGCTGGAAAGGGCCGTGTCATCGTCGCGTT
             1200      1210      1220      1230      1240      1250

             1270      1280      1290      1300      1310      1320
./wwwt CCAACCACATTTATACTCACGCACCATAGAATTCCAAAAGGAGTTCGCGGGGGCACTGTC
       ::::::::::::.::::::::::::::.::::::::::::::::::::::.:::::::::
wachi  CCAACCACATTTGTACTCACGCACCATGGAATTCCAAAAGGAGTTCGCGGAGGCACTGTC
             1260      1270      1280      1290      1300      1310

             1330      1340      1350      1360      1370      1380
./wwwt ACTGGCAGACGCTGCCGTGGTGCTTGAGATTTACGGAGCGCGCGAACAACCGGTGGATGG
       :::::::::::::::::::::::: :::::::::::::::::::::::::::::::::::
wachi  ACTGGCAGACGCTGCCGTGGTGCTCGAGATTTACGGAGCGCGCGAACAACCGGTGGATGG
             1320      1330      1340      1350      1360      1370

             1390      1400      1410      1420      1430      1440
./wwwt CGTGTCCTCGGAAATCATCACCGATGCGATGACCATTCCAGTGGTGTACGAACCTAATTT
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  CGTGTCCTCGGAAATCATCACCGATGCGATGACCATTCCAGTGGTGTACGAACCTAATTT
             1380      1390      1400      1410      1420      1430

             1450      1460      1470      1480      1490      1500
./wwwt CTCTGCAGTCCCAGAACGCATTGCAGAAATCGCAGGACCTAATGACATCGTGCTCACCAT
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
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wachi  CTCTGCAGTCCCAGAACGCATTGCAGAAATCGCAGGACCTAATGACATCGTGCTCACCAT
           1440      1450      1460      1470      1480      1490

               1510      1520      1530      1540      1550      1560
./wwwt GGGTGCAGGTTCCGTGACCATGCTTGCTCCAGAAATCCTGGATCAGCTGCAAAACAATTA
       ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
wachi  GGGTGCAGGTTCCGTGACCATGCTTGCTCCAGAAATCCTGGATCAGCTGCAAAACAATTA
           1500      1510      1520      1530      1540      1550

               1570      1580
./wwwt GGACGTAAGTGAACAAGGCAG---------------------------------------
       :::::::::::::::::::::
wachi  GGACGTAAGTGAACAAGGCAGGACTAGCGTGAACAAAAAAGTCATCGCCATTGTTGTGGG
           1560      1570      1580      1590      1600      1610

./wwwt ------------------------------------------------------------

wachi  TGTGGTTGTTGTCCTCGTGGCAATCCTGGGCGTTGTTGCCTGGTTCGTTCCCATCCTCAA
           1620      1630      1640      1650      1660      1670

./wwwt ------------------------------------------------------------

wachi  GGTGGGAAACATTGAAGTAACCGGTGCAACGCGCACAGATCCGGATCAAGTACTGGAAGT
           1680      1690      1700      1710      1720      1730

./wwwt ------------------------------------------------------------

wachi  CTCCGGGATTGTTGAGGGCGAAAACCTCTTCCGCGTCGATGCGACTGCAGCAGGGCAAAA
           1740      1750      1760      1770      1780      1790

./wwwt ------------------------------------------------------------

wachi  CATTGTGGAATTGCCCTGGGTGAAATCGGTGACCGTTAACCGTGCCCTGCCAAGCACCAT
           1800      1810      1820      1830      1840      1850

./wwwt ------------------------------------------------------------

wachi  CACCGTGGAGCTGACAGAGCGTGAGCCTGCAGTGTTCATCAAGCGTGCTGATGGTGACCA
           1860      1870      1880      1890      1900      1910

./wwwt ------------------------------------------------------------

wachi  TGTCATTGACACCGAGGGTAAAGAAATTATCATTGGAACACCCCCGGTGGGAACAGTAGA
           1920      1930      1940      1950      1960      1970

./wwwt ------------------------------------------------------------
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wachi   AGTTTCTGGCGCGGATGAAGGAAACTCAGAAGTGCTTCCTGCGGTTATTGCTGTAATCAA
              1980      1990      2000      2010      2020      2030

./wwwt  ------------------------------------------------------------

wachi   CGCAATTAAAGCGCAAGATGCGCAAATGACAGAAAGTATCCAGGTAGTGGAAGCTCCGGA
              2040      2050      2060      2070      2080      2090

./wwwt  ------------------------------------------------------------

wachi   TCAATTTGATATCTTGCTGAAAATGAATGACGGCCGGGAAATCTACTGGGGATCCTCGGA
              2100      2110      2120      2130      2140      2150

./wwwt  ------------------------------------------------------------

wachi   AAACAACCACGACAAAGCGGTGGCAATGTCGACTGTTTTGAAGCGGGACGGCCAACGTTG
              2160      2170      2180      2190      2200      2210

./wwwt  ------------------------------------------------------------

wachi   GAACATTAGCTCACCCTCAATGGTGACAGTCCGCTAAAGTAGCTGGGTAGTTCCGGTTCA
              2220      2230      2240      2250      2260      2270

./wwwt  ------------------

wachi   CCCGTTTCCACAACGCGT
              2280      2290
```

CONCLUSION

If a telephone conversation with Applicants' Attorney would expedite the prosecution of the above-identified application, the examiner is urged to call the undersigned at (617) 227-7400.

Respectfully submitted,

Amy E. Mandragouras, Esq.
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FOR
Elizabeth A. Hanley, Esq.
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Dated: **August 26, 2002**

39. **(New)** An isolated nucleic acid molecule comprising the nucleotide sequence set forth in SEQ ID NO:1, or a complement thereof.

40. **(New)** An isolated nucleic acid molecule consisting of the nucleotide sequence set forth in SEQ ID NO:1, or a complement thereof.

41. **(New)** An isolated nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2, or a complement thereof.

42. **(New)** An isolated nucleic acid molecule which encodes a polypeptide consisting of the amino acid sequence set forth in SEQ ID NO:2, or a complement thereof.

43. **(New)** An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating cell wall biosynthesis.

44. **(New)** An isolated nucleic acid molecule consisting of a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating cell wall biosynthesis.

45. **(New)** An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating the production of a fine chemical.

46. **(New)** An isolated nucleic acid molecule consisting of a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a

complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating the production of a fine chemical.

47. **(New)** An isolated nucleic acid molecule comprising the nucleic acid molecule of any one of claims 39-42, and a nucleotide sequence encoding a heterologous polypeptide.

48. **(New)** A vector comprising the nucleic acid molecule of any one of claims 39-42.

49. **(New)** The vector of claim 48, which is an expression vector.

50. **(New)** A host cell transfected with the expression vector of claim 49.

51. **(New)** The host cell of claim 50, wherein said cell is a bacterial cell.

52. **(New)** The host cell of claim 51, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium.*

53. **(New)** The host cell of claim 52, wherein the expression of said nucleic acid molecule results in the modulation in production of a fine chemical from said cell.

54. **(New)** The host cell of claim 53, wherein said fine chemical is selected from the group consisting of: organic acids, proteinogenic and nonproteinogenic amino acids, purine and pyrimidine bases, nucleosides, nucleotides, lipids, saturated and unsaturated fatty acids, diols, carbohydrates, aromatic compounds, vitamins, cofactors, polyketides, and enzymes.

55. **(New)** A method of producing a polypeptide comprising culturing the host cell of claim 53 under conditions in which the nucleic acid molecule is expressed, thereby expressing the polypeptide.